Invasive Species
By James MacDonald, Ph.D

Everyone has heard the term “invasive species.” But what is an invasive species? How do they impact New York anglers? What, if anything, can be done? An exotic species is a non-native plant or animal deliberately or accidentally introduced into a new habitat. Many exotic species are potential predators or competitors with native species. Because the population control measures that evolved in their native habitat are often not present in their new habitat, the introduced species can outcompete the local native species. When this happens an exotic species becomes an invasive species. Most non-native species are not harmful; however, some cause significant negative economic or ecological impacts or cause harm to human health. These species are defined as “invasive species.”

Exotic species may be introduced to a new area in several different ways. Most transfers are accidental, through ballast water, agricultural imports, or packing material. Some famous examples, such as the round goby, zebra mussel or the Asian longhorned beetle, are believed to have entered the United States through shipping. Some exotic fish introductions are deliberate. Sometimes thoughtless anglers move fish into a new area to create new fishing opportunities or release their live bait fish, thus spreading exotic species. Another common source of exotic fish and invasive aquatic plants is the aquarium and backyard pond trade. Many exotic fish and plants are sold in this trade. People often dump their aquarium in the local pond when they no longer want to care for it. Also, when rivers flood, as they did after Hurricane Irene, backyard ponds that are flooded release all their exotic plants and fish into the local river. Anglers and boaters can also spread exotic plants and animals from one pond to another on their boat trailers and fishing gear.

The cost of invasive species is real. When a species has potential to do harm, managers must often act before harm is done and the invasive species is still controllable. Resource managers are often forced to spend heavily (from limited budgets) on control mechanisms. The NYS DEC spent $200,000 to eradicate northern snakehead from a pond in Orange County in 2008 and 2009, and California spent $5.7 million to control hydrilla in just one lake between 1979 and 1994. Those dollars spent on control are on top of the value of any damage done to native fisheries. Exotic species are much easier to control early in their introduction; once firmly established it is often too late.

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So what to do? Anglers can do a lot to help limit the spread of exotic species.

1. The most important thing is to NEVER move fish from one water body to another. Aside from the potential for causing an invasion, moving fish around can also spread diseases, parasites, or other risks into previously unaffected lakes.


3. Never release pets or live fish from aquariums or pet stores into a local water body. If you have a pet fish you can no longer care for, contact a local pet store— they might be interested in taking it for re-sale.

4. If you suspect a possible aquatic invasive species, you should report it to NYSDEC authorities. Reports MUST include a photograph of the suspected invasive and the exact location where it was found. Send reports to:
   - Fwfish1@gw.dec.state.ny.us – Long Island
   - Fwfish2@gw.dec.state.ny.us – New York City

5. Here are some exotic fish species of interest in the downstate region. With the exception of carp, these species should not be returned to the water if caught.

### Exotic Fish Species in LI & NYC Waters

<table>
<thead>
<tr>
<th>Common Name/Scientific Name</th>
<th>Information</th>
<th>Photo</th>
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<tbody>
<tr>
<td><strong>Northern Snakehead</strong></td>
<td>Channa argus&lt;br&gt;Native to East Asia/Russia&lt;br&gt;Introduced to NY as pet/food&lt;br&gt;Predator, competes with local species&lt;br&gt;No reports of findings in Orange County after control measures in 2008.&lt;br&gt;Currently reproducing in Meadow &amp; Willow Lakes of Flushing (monitored, but should be reported)</td>
<td><img src="image" alt="Northern Snakehead" /></td>
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<tr>
<td><strong>Oriental Weather Loach</strong></td>
<td>Misgurnus anguillicaudatus&lt;br&gt;Native to Asia&lt;br&gt;Popular aquarium fish&lt;br&gt;Found in Lake Ronkonkoma&lt;br&gt;Competitors of native species, can grow up to 18 inches long</td>
<td><img src="image" alt="Oriental Weather Loach" /></td>
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<tr>
<td><strong>Mosquitofish</strong></td>
<td>Gambusia affinis&lt;br&gt;Native to the southern United States&lt;br&gt;Live bearers&lt;br&gt;Introduced widely by government for mosquito control</td>
<td><img src="image" alt="Mosquitofish" /></td>
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<tr>
<td><strong>Carp and Goldfish</strong></td>
<td>Cyprinus carpio/ Carassius auratus&lt;br&gt;Members of the minnow family&lt;br&gt;Native to Europe&lt;br&gt;Popular as food, pets, and decoration&lt;br&gt;Feeding habits can cause turbidity problems in lakes</td>
<td><img src="image" alt="Carp and Goldfish" /></td>
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Angling ethics is primarily a matter of respect. Respect for the resource and respect for the other users of the resource. New York State has a population of over 19 million people, a large portion of which live in New York City or on Long Island. Although we are blessed with an abundance of places to fish in the New York metro area, it is nevertheless a finite resource. Regardless of where you fish, you are not likely to be alone, and others will be fishing after you. When you are fishing, you should think about how best to protect the resource for future users and how to share the resource with other users.

Respect the Resource – Protect it for the future

• **Carry in, Carry out (don’t litter!)** – better yet, if you see litter left by someone else, pick it up and dispose of it properly.
• **Know and follow the fishing regulations** – but keep only those fish that you plan to eat. If you can legally take ten fish, don’t take them all if you only need five for dinner.
• **Practice catch and release** – if you don’t plan to keep a fish, handle it gently, try not to tire it with a long fight, and always release it quickly.
• **Don’t release unused baitfish** - unless you caught them in that water. NEVER move fish from one water to another.
• **Don’t spread invasive species** - make sure to “Inspect, Remove, Clean and Dry, Disinfect” your boat or waders and fishing equipment before moving to another water.
• **Poachers are thieves** – they are stealing from you, other anglers and the environment. Whenever you see violators call the DEC 24 hour dispatch number: (877) 457-5680.

Respect other users – Share the resource

• **Fishing spots are first come first serve** – if someone beat you to your favorite spot, move on and get up earlier next time.
• **Share your space** – where fishing spots are limited, don’t hog a spot, move over and offer to share.
• **Get landowners permission** - be sure you have the permission of landowners if you plan to fish on private property. If you don’t, you’re trespassing.
• **Keep noise down to a minimum** - not only will you spook the fish, you may disturb others fishing at the lake.
• **Share advice and techniques** – helping someone learn proper and effective fishing techniques will spread ethical angling and may start a friendship.
• **Fish safely** – unsafe practices endanger others as well as yourself.

The main reason that most of us fish is to have fun. If we all follow these simple rules, then everyone can have fun fishing now and in the future!
Q: How do I catch a blackfish (tautog) ?

Fall is a great time to go fishing for blackfish. Fish for them near structure such as rocks or pilings found among jetties, bridges and piers. They prefer to eat crabs and other crustaceans. Structured areas provide perfect places for them to find food and seek shelter from predators. They can be found inshore in early fall, in warmer water, but when water temperatures become too cold around the middle of November, they move out to sea into deeper warmer water.

Blackfish can put up a serious fight, so you’ll need strong tackle. A seven foot pole, with 30lb test line, a dropper loop rig, and a virginia style hook (size 2 or 3) is a good start. Bait the hook with fiddler crab or green crab. When using fiddler crabs, push the hook through an opening in the rear leg socket and out the opposite side. When fishing with green crabs, cut the crab down the middle with scissors so you have two sections with legs on each side. Pull the legs off and push the point of the hook through the one leg socket and out another so the point is showing.

Hooking and landing a blackfish is challenging, but you’ll get it with time and practice. After you drop your sinker down, feel around for a ledge or a hole as often there will be a blackfish using it as a home. These fish have big rubbery lips and are known as bait thieves, so caution is a must. Be patient when you first get the tap on the end of the pole - don’t be quick to strike as this is often the fish merely sucking at the bait. Wait for a strong tug, then strike and reel fast to get the fish out of the rocks. Losing hooks and sinkers is common when fishing for blackfish, so bring plenty of extras and be prepared for a strong fight.
The term ocean currents refer to the different movements of water in the ocean. There are two types of currents in the ocean, surface and deep water. Together these currents affect the circulation of moisture on Earth which causes the differences in climate around the world.

Surface currents are a result of wind and gravity. They lie within the top 100's of meters of the ocean and are deflected different directions in either hemisphere by the Coriolis Effect (the apparent deflection of objects moving relative to the earth's surface due to the rotation of the earth). This deflection brings water currents to varying parts of the world. Different factors can impact the density of water, for example salinity or temperature. When some water becomes denser, it will sink, creating a vortex that pulls further additional water towards it- i.e. the current. Gravity also comes into play when two currents meet, or fresh water meets salt. Generally, when water sinks in one area, it rises up somewhere else. These areas where deep water rises, known as uprisings, are cold, oxygen rich, and are usually some of the world’s richest fishing grounds.

Deep ocean currents, also called thermohaline circulation, are much larger and account for 90% of the ocean. These currents are controlled by density caused by salt and temperature differences. The global conveyer belt is the Earth's system of ocean currents, beginning in the North Atlantic this belt of currents moves southward past the equator to Antarctica and back up towards the Indian and Pacific Oceans. For more information on how the ocean's conveyer belt works check out [http://oceanservice.noaa.gov/education/tutorial_currents/05conveyor1.html](http://oceanservice.noaa.gov/education/tutorial_currents/05conveyor1.html).

So what do currents have to do with fishing? You may have caught a tropical fish off a New York pier; this is due to the currents in the Atlantic Ocean, mainly the Gulf Stream. The Gulf Stream moves northeast off the east coast of the U.S., occasionally depositing fish from further south in NY waters. Fish also use the currents to travel to and from their breeding grounds. Although not a tropical, the American Eel, a commonly found species in New York waters, breeds in the Sargasso Sea near Bermuda, and the larvae drift up the Gulf Stream. They then live out their lives in our lakes and rivers, returning to the Sargasso Sea to breed at the end of their lives. Check out the Chesapeake Bay Program for more information on American Eels at [http://www.chesapeakebay.net/bfg_american_eel.aspx?menuitem=14384](http://www.chesapeakebay.net/bfg_american_eel.aspx?menuitem=14384).
FISHING HOTSPOTS

Long Island: Corey Beach, Blue Pt.

Type: Saltwater

Where: Town of Brookhaven Beach, Blue Pt.

Getting There: Take 495 to exit 62. Take Nicolls Road south to end. Turn left onto Montauk Hwy. Turn right onto Atlantic Avenue. Bear right on Middle Road. Make a left onto Corey Avenue.

Access: Open year round, closes at dusk.
Boat Launch: Yes
Fishing Pier: Yes
Shoreline: 30-50 ft, for seining
Bathrooms: Yes, portable, or public restrooms by beach.

Species:
Bluefish (snapper)
Summer flounder (fluke)
Blue Claw Crabs

Specific Rules for Site Name: Park closes at dusk. For night fishing a permit is required ($25 for town residents, $35 for non-residents). You can obtain this permit from Town of Brookhaven. For information go to www.fishingstop.com/fishing_permits.htm

Other:
Anglers 16 and over must register for the free Recreational Marine Federal Registry to fish the marine and coastal district. For more information and to register go to http://www.dec.ny.gov/permits/54950.html.

For the current marine recreational fishing regulations visit http://www.dec.ny.gov/outdoor/7894.html

For general information about the Town of Brookhaven: http://www.brookhaven.org/

Tips:
Remember blue claw crabs have regulations too: hard shell crabs must be 4 ½”, soft shell crabs 3 ½” or peeler/shedder crabs 3”. A peeler or shedder crab is one that is just about to molt. You can tell if the shell looks fragile and is dull in color. Sometimes the shell is partially cracked as well. You are allowed 50 crabs per person in one day and can fish all year.

In late summer snapper fishing is good down on the South Shore. Rig your rod up with a snapper hook (long shanked hook) and bobber. Silversides or spearing is best to use for bait. The bottom around the dock is mostly sand, so getting snagged shouldn’t be an issue. Have fun!
FISHING HOTSPOTS

NYC: Conference House Park, Staten Island, NY

**Type:** Saltwater  
**Where:** Pittsville Street, Hylan Boulevard, Surf, Richard Avenues

**Public Transportation:**

**Subway:** Staten Island Railroad to Tottenville Station: Walk south on Bentley St. to Amboy Rd. then turn right. Keep walking to Craig avenue then turn left. Walk to Hylan Boulevard and turn right into Conference House Park. Total time from Tottenville Stn: Approximately 10 minutes.

**Bus:** Take the S78 to Craig Avenue and Hylan Blvd. Follow Hylan Blvd east into Conference House Park.

**Car:** Head east on Hylan Boulevard until the end; Hylan Blvd terminates at Conference House Park. Parking lot is on the left.

**Access:**  
**Boat Launch:** No  
**Fishing Pier:** No  
**Shoreline:** Open Beach  
**Bathrooms:** Restroom facilities are located by the park entrance next to the parking lot.

**Species:**  
Striped bass  
Bluefish  
Sea robin  
Summer flounder (Fluke)

**Hours:** The park is open from dawn until dusk

**Additional Information:**  
Conference House Park  
[http://www.nycgovparks.org/parks/conferencehousepark](http://www.nycgovparks.org/parks/conferencehousepark)

**Tips:** Before you plan a fishing trip to a saltwater venue, always check the tide times; in some places an incoming or outgoing tide is preferred. Try to avoid fishing at high or low tides; as a rule of thumb these are the times when fish stop feeding. For striped bass and bluefish, try casting lures such as tins and poppers at dawn and dusk. For a more relaxed approach, also try baiting a hook with clam belly or a bunker chunk (manhadden), and cast it into the surf. Be sure to use stout tackle when targeting striped bass and bluefish, so a 9ft pole and a reel loaded with 30lb test line is needed as these fish put up a great fight. For sea robins and summer flounder (fluke); use small hooks and smaller bait, clam and spearing (atlantic silverside) are favorites. The tackle needed can be lighter than what you use for stripers or bluefish. A 7ft pole and a reel loaded with 20lb line will be sufficient.
Long Island:

October 15th, 2011
Fall Family Fishing Festival
Hempstead Lake State Park
10am-4pm
No pre-registration required. Cost is $6 pp, free for children under 12. $8 parking fee per vehicle, free with empire pass. Event activities include open fishing, free loaner rods & bait, casting for pumpkins contest, pony rides, face painting, magic show, and bouncy slide (weather permitting).

NYC:

Baisley Pond Free Fishing Day
October 8th, 2011
Baisley Pond Park
10am-2pm
No pre-registration required, open fishing throughout the day. Loaner rods & bait provided.

To get more information, log on to http://www.ifishnewyork.org.
To ask questions or register, call 631.444.0283 (LI) or 718.482.4022 (NYC).